layer, by implanting first-conductivity-type impurities into the bottom surface of the at least one isolation trench.

28. The method of claim **27**, wherein said forming the first first-conductivity-type high-concentration impurity region includes implanting the first-conductivity-type impurities using the hard mask, and

wherein the method further comprises:

forming, simultaneously with said forming the first first-conductivity-type high-concentration impurity region, a second first-conductivity-type high-concentration impurity region on a bottom surface of the at least one gate trench, by implanting the first-conductivity-type impurities into the bottom surface of the at least one gate trench exposed from the hard mask.

29. The method of claim **26**, further comprising:

forming an inter-layer insulation film on the semiconductor layer;

forming a first terminal on the inter-layer insulation film, the first terminal being connected to the at least one gate electrode; and

forming a second terminal on the inter-layer insulation film, the second terminal being connected to one of the impurity regions of the semiconductor layer and the buried electrode.

30. The method of claim **29**, wherein said forming the first terminal and said forming the second terminal are performed simultaneously by depositing a metallic material on the entire surface of the inter-layer insulation film and then patterning the metallic material into a specified shape.

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